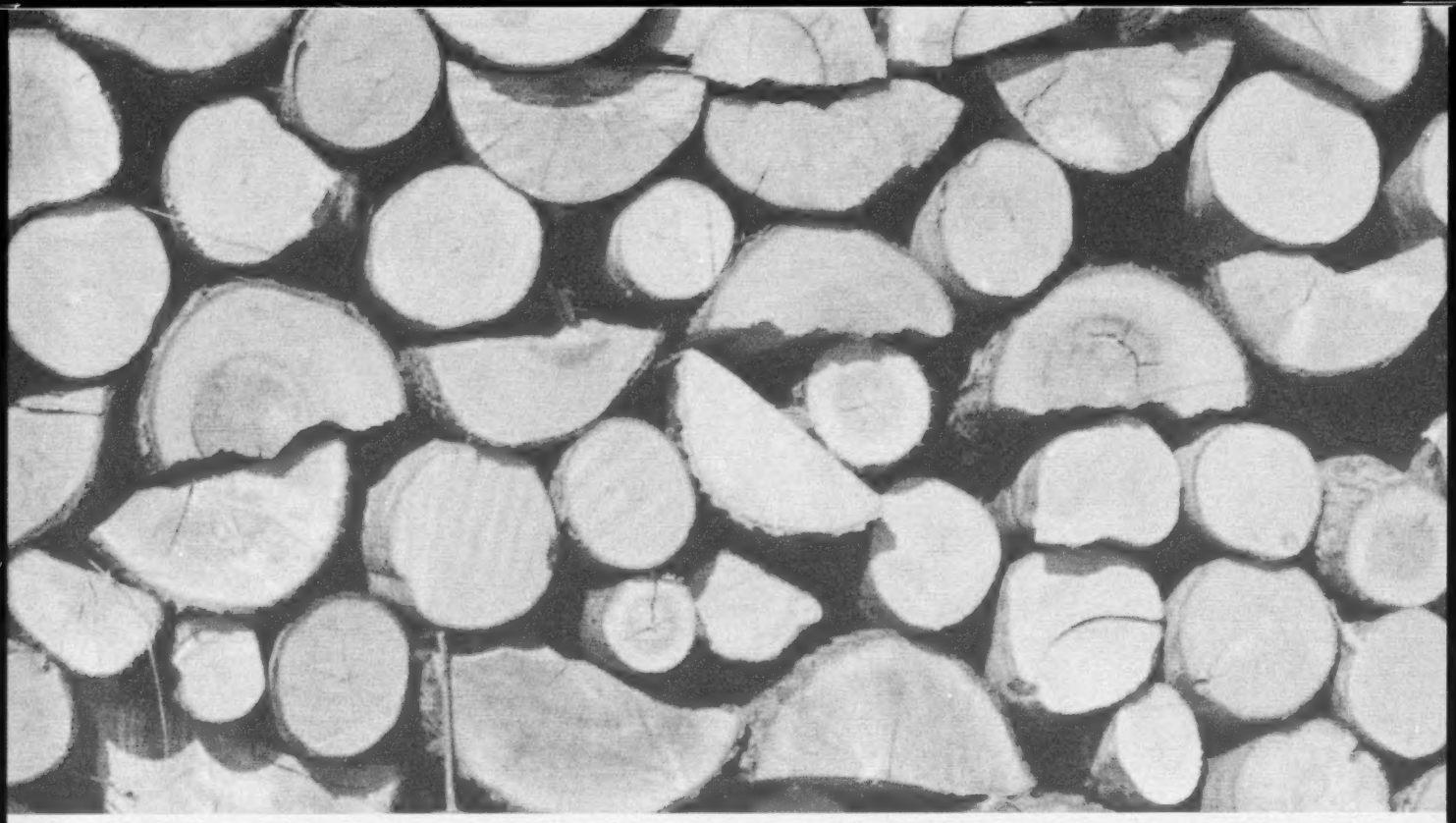

Northwest Territories Biomass Energy Strategy 2012 2015

Northwest Territories Environment and Natural Resources

Message from the Minister

Impressive progress has been made in the use of biomass energy in the Northwest Territories (NWT) during the past several years.

The Government of the Northwest Territories' (GNWT) on-going support for the development of biomass energy has been guided by the NWT Biomass Energy Strategy released in 2010.

The NWT Biomass Energy Strategy 2012-2015 maintains this momentum and helps bring biomass energy to the forefront of the shift for increased renewable energy use in our communities.

Biomass energy in the form of wood fuels has a long tradition in NWT culture. It remains an important source of energy for many northern communities. The potential for biomass to help achieve tangible results in reducing dependence on fossil fuels and reducing our greenhouse gas emissions associated with energy use in the North has been proven.

This Strategy outlines a balanced approach to biomass energy development and supports government, business, individual and community efforts to reduce energy costs, decrease greenhouse gas emissions and develop a local, renewable industry.

The NWT Biomass Energy Strategy 2012-2015 builds on our progress in establishing biomass as an integral part of the NWT energy mix and a key component of reducing greenhouse gas emissions.

J. Michael Miltenberger
Minister
Environment and Natural Resources

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Back cover, bottom left: Pellet boiler firebox, Yellowknife Combined Services Building – Photo Credit: City of Yellowknife and AE Associated Engineering

Purpose

The NWT Biomass Energy Strategy 2012-2015 builds on progress gained in the development of biomass energy in the Northwest Territories (NWT) during the past two years through the implementation of the NWT Biomass Energy Strategy 2010. It serves as a tool for the Government of the Northwest Territories (GNWT) to lead and coordinate actions promoting the creation and use of biomass energy in the NWT.

Goals

The Biomass Energy Strategy 2012-2015 enables the creation of conditions for biomass to become an integral part of a more sustainable energy mix for the NWT by:

- establishing effective government policies and programs;
- supporting private sector innovation and initiative in developing biomass energy markets; and
- building strong partnerships with communities, First Nations, other levels of government and the private sector.

Objectives

Actions contained in the Strategy are designed to achieve the following measurable results towards the development of biomass energy, related economic opportunities and environmental sustainability:

- Increase the use of biomass fuels, such as cord wood, wood chips and pellets, in all segments of the NWT space heating market.
- Achieve measurable life cycle greenhouse gas emission reductions by using biomass to offset fossil fuels.
- Create lasting economic benefits and providing cost savings in energy use, employment and business opportunities in the supply and distribution of biomass products and services.
- Ensure increased use of biomass fuels and forest resources is sustainable, with full consideration of the long-term health of the forest landscape and the resources and values it contains.

Southern Northwest Territories forest – Photo Credit: ENR/GNWT

Forests, Energy and Our Environment

Biomass energy is any energy derived from a biological source, such as wood, agricultural crops, wastes or municipal solid wastes.

In the NWT, the most common type of biomass used to produce energy is wood. Wood fuels provide significant energy cost savings to NWT residents, businesses and institutions. Greenhouse gas emissions associated with northern heating requirements are reduced by supplementing fossil fuels with wood. The economic opportunities of developing local capacity for producing biomass fuels are now apparent.

Biomass, in the form of cordwood, was estimated to be about six percent of total space heating energy demand in 2007. The use of cordwood has remained relatively stable since then. Consumption of wood pellets, purchased in Alberta and British Columbia, has grown dramatically to provide approximately five percent of total space heating needs. These developments represent a substantial shift in the way the NWT meets its energy needs and views its energy sources.

Cordwood is almost entirely used for home heating. The use of wood pellets is split between residential, commercial and institutional segments of the market and is mainly concentrated in communities connected to an all-season road system.

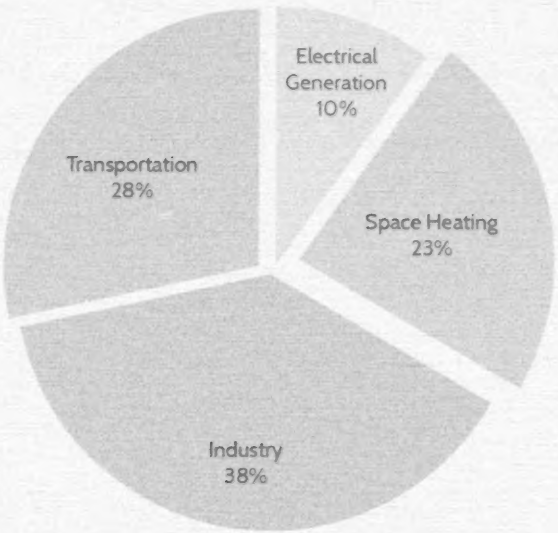
Forests have always provided a renewable source of energy for heating, cooking and as a resource for many other goods and necessities. Wood pellets are now becoming a common fuel in our communities. There is considerable economic potential for increasing the use of pellets and other forms of wood. However, increasing reliance on NWT forest resources for energy needs must be balanced with other forest uses and the ecological benefits of forests.

The use of biomass fuels derived from forest resources is growing as prices for conventional fuels continue to increase and awareness of impacts to our climate and environment caused by greenhouse gas emissions grows. Biomass energy is recognized as being part of the solution to reducing greenhouse gas emissions, while potentially providing a substantial portion of our energy needs.

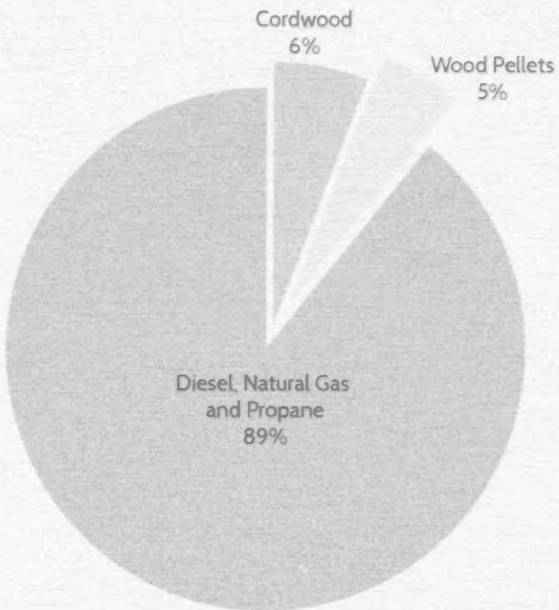
Greenhouse gas emissions associated with biomass energy are quantified based on a net change in forest carbon stocks over time. Forest management practices in Canada and the NWT are designed to ensure a net zero change in carbon stocks in our forests by ensuring harvested trees are replanted to reabsorb carbon dioxide released from the wood during combustion for energy production.

The GNWT recently commissioned a comparative life cycle analysis study for emissions from heating oil and biomass fuels consumed in the NWT. The study, done by the Saskatchewan Research Council, provides a better understanding of the associated emissions, including emissions from fossil fuels used to power harvesting, processing and transportation equipment in the forestry sector. The complete study can be found on-line at www.nwtclimatechange.ca

Biomass development highlights the relationship between forests, energy and the environment. Appropriate planning and measures to ensure biomass development takes place responsibly and sustainably can ensure the use of biomass fuels in building a more sustainable energy future for the NWT.



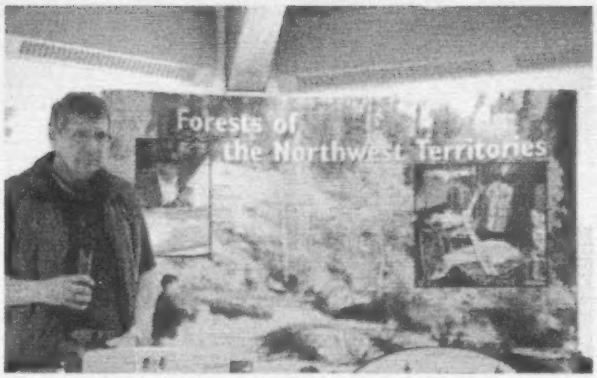
NWT total energy use 2009-2010 (total 18,700,000 GJ)
Source: Northwest Territories Energy Report, May 2011



Estimated biomass share of NWT space heating demand 2010-2011
Source: ENR estimates based on supplier survey data (2011)

Strengthening Government's Role

Biomass is used by the GNWT to heat public buildings. Programs are now in place to support biomass development and community-led biomass projects initiated in the earlier version of the NWT Biomass Energy Strategy. This support has helped to make the NWT a leader in the deployment and use of biomass technologies.



Tom Lakusta, Manager, Forest Resources, ENR speaking at a regional biomass workshop held in Fort Good Hope in May 2011 – Photo Credit: ENR/GNWT

Log deck, southern NWT – Photo Credit: ENR/GNWT

Government Leading by Example

The GNWT is making biomass an integral part of the NWT energy mix by supporting the economic opportunities of increased production and use of biomass energy sources for the benefit of residents, businesses and communities.

ACTION 1:

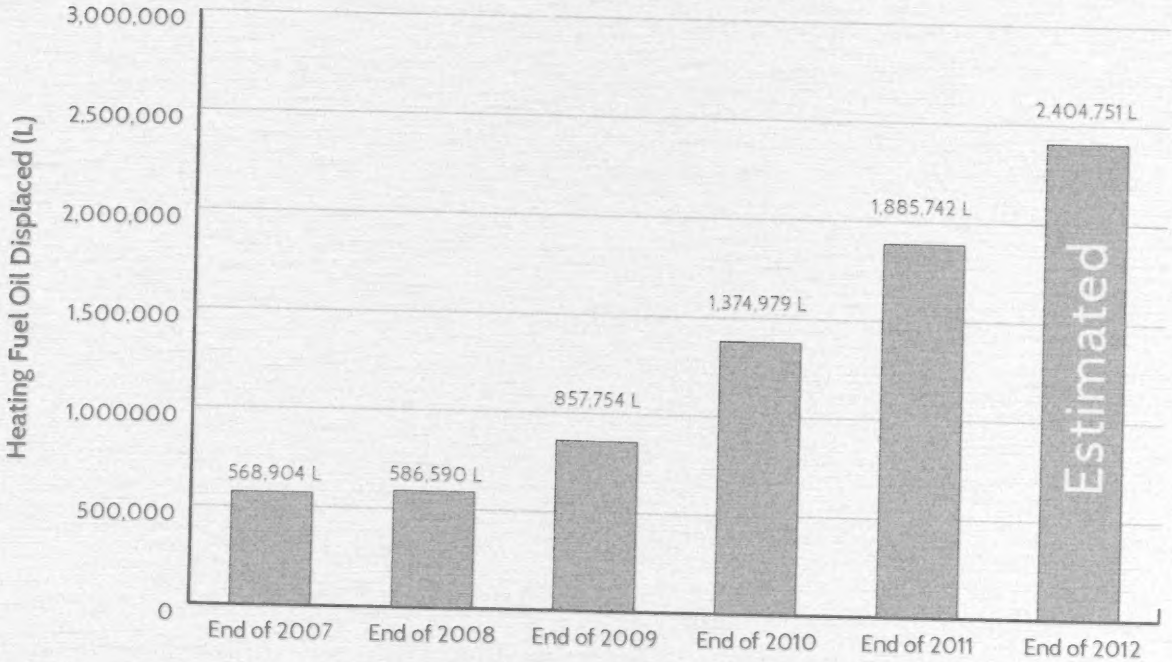
Increase Use of Biomass to Heat Public Buildings

The Department of Public Works and Services (PWS) plays a pivotal role in demonstrating the economic benefits of using biomass through the installation of wood pellet boilers to supplement oil heating in public facilities.

In the past five years, PWS commissioned 11 biomass heating systems. Three more are currently under construction. These installations displace more than 2.4 million litres of heating oil and reduce more than 6,500 tonnes of greenhouse gas emissions a year. This represents about 16 percent of the GNWT's heating fuel consumption. Future projects will add to this accomplishment and further demonstrate the benefits of biomass energy.

This work has helped create consumer confidence in pellet technology and has generated a core market for wood pellet fuels, products and services. It provides opportunities for local businesses in the supply and distribution of pellet fuels and generates investment and increased capacity for related technical services and expertise.

The results of these developments have benefitted other segments of the heating market and provided a new renewable heating source option for consumers. The GNWT is building on this progress by expanding its use of biomass for heating public buildings, growing existing markets and creating new markets.



ACTION 2:

Examine Potential for Integrating Biomass in Public Housing

The Northwest Territories Housing Corporation (NWTHC) can benefit from expanded use of biomass heating for public housing. The Corporation has about 2,300 public housing units. The potential for expanding the use of biomass heating in public housing will be examined in consultation with industry experts, the Arctic Energy Alliance (AEA) and other government departments.

The greatest use of biomass heating is expected to be best applied to large housing complexes using either an independent biomass heating system or a district distribution biomass system tied to other public buildings. The potential for district distribution systems may also apply in communities with dense or clustered areas of public housing units.

The NWTHC's Contributing Assistance for Repair and Enhancements (CARE) program provides eligible clients with assistance for energy efficient upgrades. There may be potential for private homeowners to implement biomass heating through the CARE program. Installations of wood stoves, pellet stoves and, possibly, larger biomass heating may be partially or fully covered under CARE. The CARE program requires an application process to determine eligibility.

Many NWT residents have installed wood pellet stoves or high efficiency conventional wood stoves during the past few years using rebates from the Energy Efficiency Incentive Program (EEIP).

ACTION 3:

Examine Models for Supply and Distribution of Biomass Fuels in all Communities

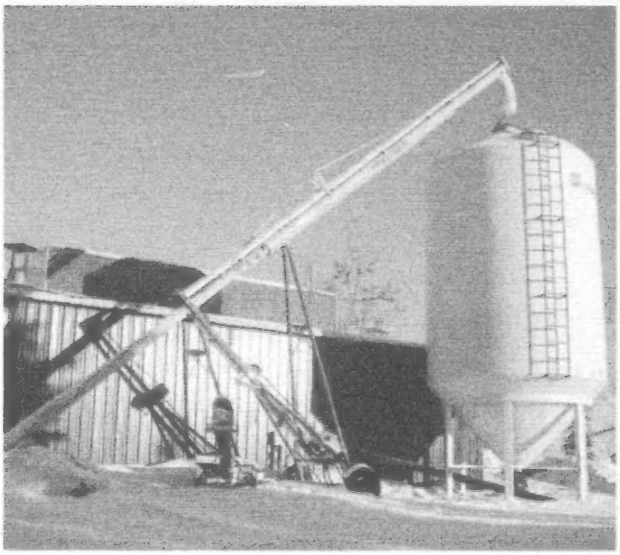
Private sector investment in wood pellet transportation, storage and distribution infrastructure and operations occurs when there is enough demand for the product.

This has already happened in communities where PWS became an "anchor customer" by installing boilers in public buildings. It created enough demand, and pellets became commercially available for residents and small businesses. This model works in many of the larger, southern communities. However, there is still no commercial supply of pellets in most NWT communities, especially those not on an all-weather road system.

The AEA is working with ENR to identify potential clusters of buildings which could be converted to wood pellet heating systems. This would build market demand and trigger commercial supplies of pellets. This work also provides information on the necessary infrastructure and delivery models, such as barge or winter road transportation.

Other options for generating investment in supply and distribution services include community government investments or the wood marshalling yard model.

A wood marshalling yard is a market that buys wood from various harvesters and then distributes it to a broader market. In some communities, this may be an opportunity to develop a local supply of cured firewood. Other communities may have broader commercial interests in producing sawlogs, wood for pellet production or wood chips for local consumption. A marshalling yard can provide a stable year-round market for harvesters, a supply of timber for consumers requiring higher volumes of wood and local employment opportunities.



Pellet boiler installation at Sir John Franklin High School, Yellowknife – Photo Credit: Arctic Energy Alliance

Pallets of bagged pellets ready for shipping – Photo Credit: ENR/GNWT

Effective Policies and Programs

The GNWT supports biomass development through various policies and programs, which provide a framework for the uptake of biomass products and services. Effective policies and programs are essential in achieving the goals of this Strategy.

The existing framework supporting the Strategy includes the Sustainable Development Policy, the Greenhouse Gas Strategy for the NWT and the NWT Energy Plan. This framework provides principles to guide resource development and identifies biomass as a key component of sustainable energy and greenhouse gas mitigation for the NWT.

One of the goals of the NWT Greenhouse Gas Strategy 2012-2015 is to increase biomass heating capacity in residential, commercial and institutional sectors by 100 percent by 2015. This would represent about 30 percent of the NWT's total space heating demand. The current proportion of biomass energy in the NWT's space heating market is about 14 percent and includes cordwood and wood pellets (9% cordwood and 5% wood pellets).

ACTION 4:

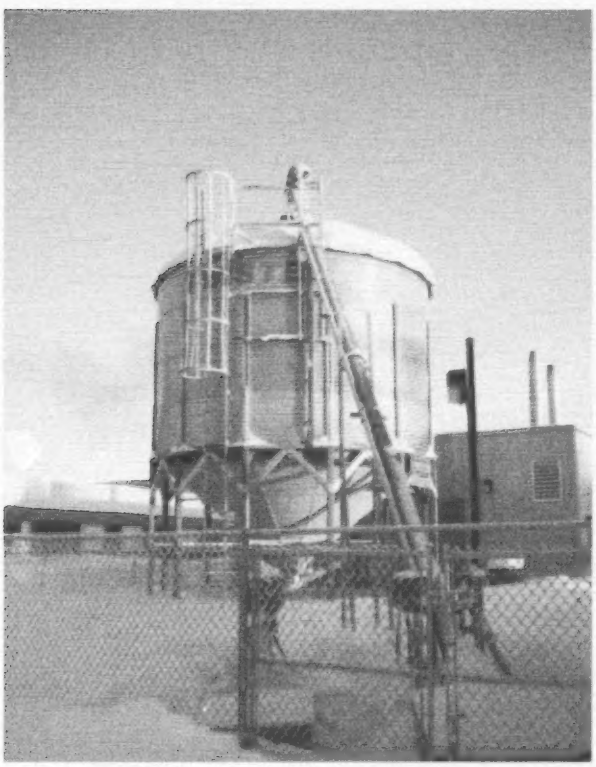
Promote Biomass Programs to Residents and Small Businesses

The existing Energy Efficiency Incentive Program (EEIP) has been successful in supporting conversions to biomass systems, such as wood pellet stoves in homes, by providing rebates to consumers. This success highlights the trends in the growth of wood pellet consumption. Rebates for larger wood pellet boilers and furnaces were transferred to the Alternative Energy Technology Program (AETP) in 2012. This program provides more assistance with the costs of installing these systems than the EEIP. Community biomass initiatives have also been a focus of the AETP's Community Renewable Energy Fund (CREF) and the Energy Conservation Program (ECP).

Promoting these programs and increasing support for individuals, businesses and communities to access them and the technical services required for small to medium-scale biomass installations will ensure the programs remain effective.

AEA will continue to play an active role in providing technical advice and information on potential cost savings to residents, small businesses and communities from wood pellet, wood chip and cordwood heating systems.

All programs can be promoted through community engagement, trade shows and media sources.



Wood pellet boiler installation at Chief Jimmy Bruneau School in Behchoko - Photo Credit: PWS/GNWT

ACTION #5:

Support Businesses and Communities in Implementing Larger-scale Biomass Projects

The GNWT worked extensively with communities and businesses to promote the installation of larger commercial or institutional biomass heating systems during the implementation of the previous Biomass Energy Strategy.

Wood pellets, wood chips or cordwood systems can provide solutions on a larger scale. District heating systems can provide heating for more than one building, with a central boiler or heat plant. The cost of installing these systems cannot be covered by current biomass assistance programs, but ENR can assist with designing and evaluating proposed systems to determine the economic payback that can be achieved by switching from heating oil to lower cost pellets.

Pilot projects done on a case-by-case basis during the past several years provided the information needed to bring these types of projects on-line. Communities, businesses, local governments and First Nations are keenly interested in these projects. They will require support through development and implementation phases, including support to explore local harvesting operations, to install their own systems.

Ensuring Economic and Environmental Sustainability

ACTION 6:

Expand Forest Inventories in Regions with Expected Increased Forest Use

Increased harvest of NWT forest resources for use as biomass energy raises concerns about the sustainability and true life cycle of greenhouse gas emissions reductions.

Concerns about widespread use and trade of wood pellets and other forest biomass commodities on a global level have led several environmental organizations to recommend limiting development of biomass resources to the most efficient uses or ensuring forest harvesting meets a high standard of sustainability to protect forest ecosystems, wildlife habitats and biodiversity.

Environmental sustainability of biomass development in the NWT is a priority. Decisions and actions by the GNWT will include the continued use of sustainability measures and standards in line with national and international protocols. Work is also underway to develop management systems to ensure ecological processes, such as the natural forest fire disturbance regime and assessments of climate change effects, are all considered.

The GNWT recognizes monitoring for healthy forests becomes more important as harvesting increases in response to greater reliance on local biomass sources. A number of initiatives are underway to deal with the energy trade-offs arising when heating energy use switches from fossil fuels to biomass. These include technical studies and analyses, and community engagement on sustainable harvest practices, forest management and planning.

Local cordwood harvesting has remained stable for a number of years in the NWT. There is also only a small amount of sawmill activity and all wood pellet fuel is imported from other jurisdictions, primarily Alberta and British Columbia. This means any future developments can take place in a well planned and sustainable manner.

A balanced and responsible approach to the increased use of NWT forest resources for biomass energy requires an adequate knowledge base and sustainability measures.

ENR supports the development of community-based sustainable forest activities and projects through forest inventories, community forest planning, harvest methods and technical support.

Forest regeneration in southern NWT – Photo Credit: ENR/GNWT

ACTION 7:

Implement an NWT Forest Inventory Tracking System to Inform Sustainable Forest Management Decisions and Reporting

Forests cover 70 million hectares in the NWT, and represent three ecozones and more than 100 ecoregions. Human activities impacting NWT forests include: land clearing for communities and roads; oil, gas and mineral exploration and development; and harvesting for biomass or other forest products.

The GNWT is building a digital forest inventory tracking system to allow natural resource managers to access up-to-date information, including forest inventory results and footprints of land use activities. This system will allow for responsible and wise stewardship of the forested landscape in the NWT.

Southern NWT forest – Photo Credit: ENR/GNWT

ACTION 8:

Promote Distribution and Use of Clean Burning Biomass Technologies

The use of biomass as a heating fuel has fewer environmental risks than the use of fossil fuels. Fuel spills from traffic accidents or fuel tank leaks can cause significant environmental damage and be costly to clean up. Fuel spills could be mitigated with increased use of biomass.

ENR has examined the potential impacts wood smoke from biomass burning technology and determined air quality impacts can be mitigated by implementing the use of the most efficient and clean burning technologies. EEIP rebates are provided for the purchase of wood stoves or wood pellet appliances with the high emission standards established by the Canadian Standards Association and the United States Environmental Protection Agency.

ACTION 9:

Develop Guidelines for Regulation of Biomass Burning Technologies by Municipalities

Particulate matter levels in the air from wood smoke can be higher in some communities and municipalities due to denser populations, depending on the type of biomass appliances used. The GNWT can provide guidance to communities and municipalities on regulating or mitigating impacts to air quality from biomass use in their communities.

ENR field survey – Photo Credit: ENR/GNWT

Supporting Industry and Market Development

There are opportunities for businesses and communities to participate in the development of the biomass industry and the growing market for biomass products and services. These include the supply of biomass resources, the manufacture and distribution of biomass fuels, retail and services for biomass products, and the increasing demand for technical services related to biomass energy systems.

The NWT already leads the country in its capacity to integrate biomass energy systems in built infrastructure based on our engineering expertise and the creation of distribution services for handling biomass fuels. These developments are largely driven by the potential cost savings realized from converting conventional, petroleum-based heating systems to biomass. They also support the GNWT's priorities of reducing greenhouse gas emissions and providing sustainable energy options for NWT residents.

The use of wood pellets has grown from an almost non-existent share of total space heating demand to an estimated five percent of total space heating in just over five years. The current proportion of biomass energy in the NWT's space heating market is about 14 percent when you add the use of cordwood.

The potential for further growth in this industry and local markets is much greater. One of the goals of the NWT Greenhouse Gas Strategy 2011-2015 is to double the space heating requirements served by biomass. This means total demand for wood pellets could increase to about 30,000 tonnes by 2015.

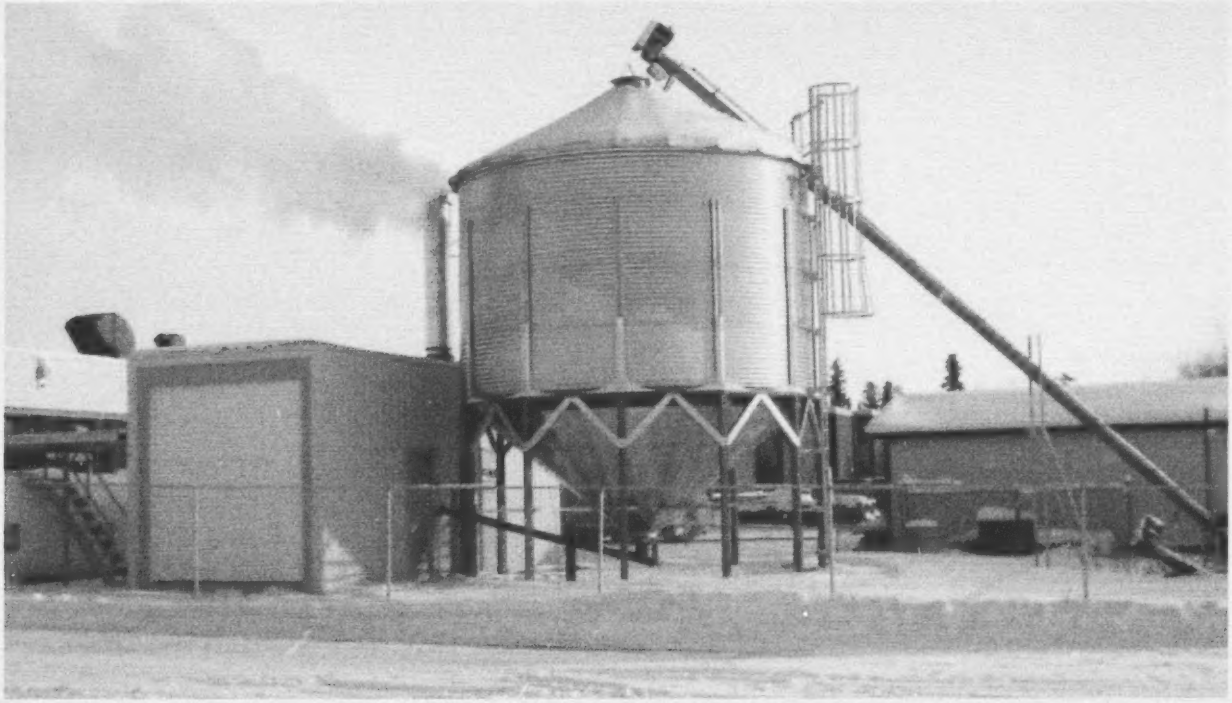
Meeting this goal requires significant investment by the private sector, an aggressive expansion of biomass availability into communities where wood pellets are not currently used, and a dramatic increase in the use of biomass in regions with current access to wood pellets. It can be achieved through effective promotion of biomass energy and a few large commercial or industrial users or large bulk customers.

A growing market for biomass fuels, such as wood pellets, provides opportunities to shift from imported energy sources to energy sources based on local resources.

Producing fuels locally to meet NWT demand could generate significant economic benefits in terms of employment, investment and new business opportunities.

Government support to industry and local governments in areas of biomass fuel production and market development will be important in maintaining the momentum of the industry and capturing the benefits for NWT residents, businesses and communities. Switching to biomass fuels provides cost savings over heating fuel, with simple paybacks on investments as quick as five to ten years depending on the particular installation.

The GNWT's efforts in these areas will focus on increasing the availability of biomass energy throughout the NWT and supporting forest industry opportunities associated with local production of biomass fuels.



Pellet boiler installation at Chief Jimmy Bruneau School in Behchoko - Photo Credit: PWS/GNWT

Biomass Energy Availability

The use of harvested cordwood is common throughout all regions of the NWT. It has been a traditional part of living in forested northern climates.

The use of wood pellets is relatively new to the NWT. The most common use is in southern regions where all-season road access enables the relatively easy distribution of pellets. Wood chips and wood briquettes have had some use, but are not common in the NWT.

Wood pellet technology is most common in larger markets, such as Yellowknife and Hay River, where products and services are available to consumers. Specialized companies in these centres have invested in distribution equipment. This allows for a wider market to access bulk pellet systems and increases the cost-saving benefits and convenience associated with the use of pellets.

The GNWT and the private sector have both supported these business operations by installing wood pellet boilers in commercial and public buildings.

ACTION 10:

Support Businesses and Communities in Developing Biomass Supply and Distribution

One of the goals of this Strategy is to increase the availability of biomass energy throughout the NWT. Challenges to be addressed before we can achieve this goal include: the supply, distribution and storage needs for ice-road communities and barge-supply communities; technical capacity for operation, service and maintenance of biomass systems; and the higher upfront capital cost of implementing biomass systems in the NWT.

Government can support businesses and communities by extending support to local biomass supply and distribution initiatives from NWT businesses and communities. The GNWT can also provide the expert and technical advice and knowledge required to plan for these types of investments.

ENR has worked with some remote communities to evaluate the business case for establishing a wood pellet supply and distribution system and found that the potential market is too small to justify the investment needed. Often these communities already use a lot of locally harvested cordwood and it will make more sense for ENR to help them upgrade woodstoves to more efficient models and support community initiatives to ensure that an adequate supply of seasoned firewood is available.

Arctic Green Energy fuel delivery truck in Yellowknife – Photo Credit: Arctic Energy Alliance

Forest Industry Opportunities

The development of biomass energy means increased opportunities in the forest industry for NWT businesses and communities.

The development of biomass energy and associated forest industry opportunities can mean greater self-sufficiency in meeting local energy needs and employment opportunities derived from forest-based activities. Jobs associated with local wood harvesting can provide much needed employment in NWT communities.

ACTION 11:

Support Businesses and communities in Developing Forest Industry Opportunities

The productive forest areas of the NWT are centred mostly in the southern regions. This is where any larger-scale forest industry operations would likely occur. Current demand for wood fuels in the NWT could be easily met within sustainable harvest levels. The boreal forest in the NWT could sustainably support several significant regional forest industries.

Existing or new forest-based operations could also be supported by increased regional demand for biomass feedstock. Community sawmill operations could be enhanced. There is also an opportunity to authorize an NWT lumber grading stamp, which could open up new markets for northern wood. Lumber with an approved grade stamp mark can be used for structural building purposes. There is also untapped potential for more traditional, log built housing and other structures.

There is significant community interest in participating in regional biomass initiatives.

Government can support forest industry opportunities by sharing technical expertise in sustainable forest management, harvest planning and inventory data, and assisting local development corporations and agencies in creating viable business and investment plans.

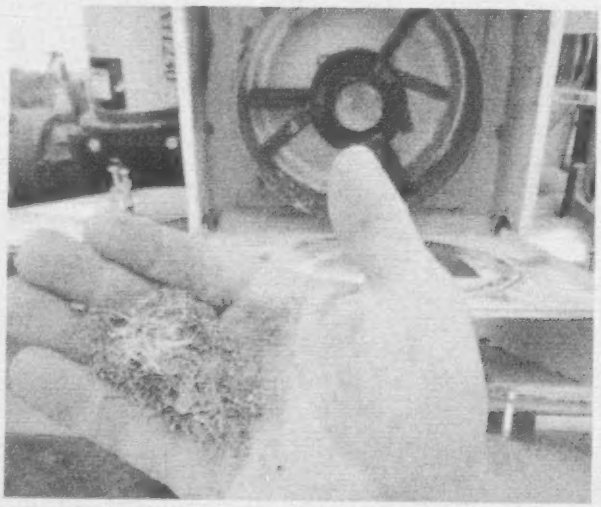
ACTION 12:

Promote Wood Marshalling Yards as a Model to Support Local Forest Industry Capacity and Increased Biomass Availability

The GNWT supports communities interested in developing forest industry capacity. The wood marshalling yard concept is promoted as a model for supply and distribution of biomass products, while incorporating and strengthening local capacity for sawmilling or other forest industry operations.

The GNWT can help businesses and communities to assess market opportunities, develop viable business plans and meet their training and capacity needs.

Rafe Smith, ENR Coordinator Silvicultural Operations, speaking at a workshop in Fort Good Hope – Photo Credit: ENR/GNWT



Ground biomass material before pelleting process - Photo Credit: ENR/GNWT

Partnerships that Work

Biomass energy development crosses many sectors and areas of jurisdiction. Development efforts require the participation of many GNWT departments and agencies, community and Aboriginal governments, businesses and federal government departments and agencies.

Partnerships have been important in adding biomass as an integral part of the NWT energy mix and a climate change solution. The GNWT has promoted sound biomass options and explored a number of biomass supply opportunities.

It has also developed partnerships with federal government departments to support the actions of the previous NWT Biomass Energy Strategy.

The NWT Forest Industry and Biomass Initiative is a GNWT-Canada partnership to develop economic opportunities in the forest sector in First Nations and NWT communities. Biomass energy markets are seen as a key driver for economic sustainability of new forest industry opportunities. This initiative supports local harvest planning and inventories, forest industry development and biomass energy market development.

The GNWT continues to pursue partnerships with First Nations, communities, businesses and industry.

Aerial photo of Deh Cho forest inventory area - Photo Credit: ENR/GNWT

NWT First Nations and Communities

ACTION 13:

Work with First Nations and Communities to Develop Forest Resource Management Agreements

The GNWT is working with First Nations governments on community-led initiatives to support biomass energy. These include biomass energy pilot projects, biomass harvest for local use, wood marshalling yards, community sawmill development and the development of forest resource management agreements.

Forest resource management agreements are long-term forest tenure agreements that allow communities to access forest resources for local and commercial purposes. The agreements promote the sustainable use of local forests for local economic development opportunities.

Forest resource management agreements are based on area and volume and will provide a framework for forest stewardship, management and licensing at a community level.

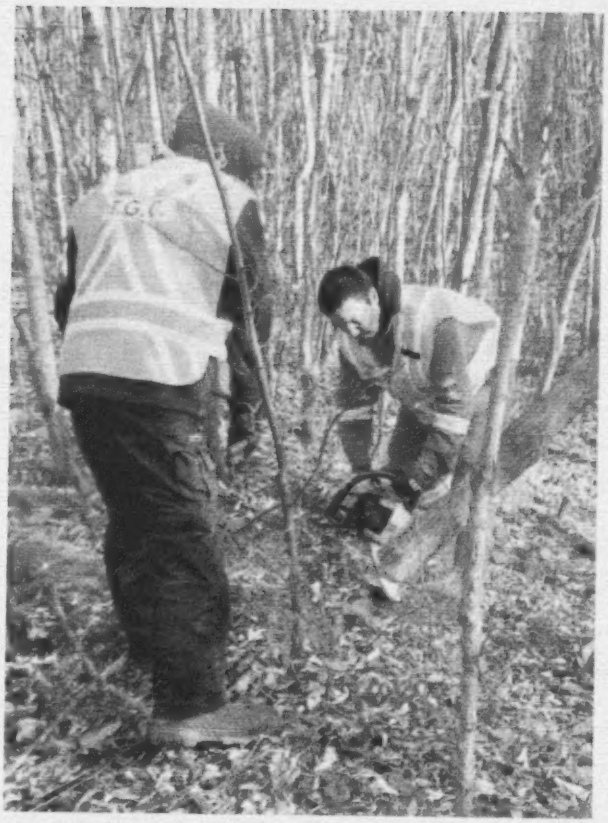


Photo Credit: ENR/GNWT

Log harvesting – Photo Credit: ENR/GNWT

Industry and Businesses

ACTION 14:

Work with Industry to Create an NWT Biomass Industry Association

There is a need for increased coordination and promotion of biomass options for businesses as biomass energy opportunities and markets in the NWT increase.

The GNWT supports the creation of a biomass industry association. An association will allow businesses to pool resources and knowledge for the promotion, growth and development of markets, products and services for biomass energy options.

Reviewing Progress

ACTION 15:

Evaluate Progress in Implementation of the Actions in this Strategy in 2015

ENR will track and evaluate the actions taken to implement this Strategy and report on progress towards the goals and objectives in 2015. Reporting on the implementation of the Strategy will ensure GNWT actions are effective. Key indicators, including employment generated, forest inventories completed, biomass fuel consumption and greenhouse gas emission reductions, will be used to measure progress. Results of the progress review will be available to communities, businesses, industry and the public.

Log forwarder at wood havesting operation in NWT – Photo Credit: ENR/GNWT

Appendix 1
Summary of Actions

Government Leading By Example

Action 1: Increase the use of biomass to heat public buildings.

Action 2: Examine the potential for integrating biomass in public housing.

Action 3: Examine models for supply and distribution of biomass fuels in all communities.

Effective Policies and Programs

Action 4: Promote biomass programs to individuals, businesses and communities.

Action 5: Support businesses and communities in implementing larger-scale biomass projects.

Ensuring Economic and Environmental Sustainability

Action 6: Expand forest inventories in regions with expected increased forest use.

Action 7: Implement a NWT Forest Inventory Tracking System to inform sustainable forest management decisions and reporting.

Action 8: Promote distribution and use of clean burning biomass technologies.

Action 9: Develop guidelines for the regulation of biomass burning technologies by municipalities.

Biomass Energy Availability

Action 10: Support businesses and communities in developing biomass supply and distribution.

Forest Industry Opportunities

Action 11: Support businesses and communities in developing forest industry opportunities.

Action 12: Promote wood marshalling yards as a model to support local forest industry capacity and increased biomass availability.

NWT First Nations and Communities

Action 13: Work with First Nations and Communities to Develop Forest Resource Management Agreements

Industry and Businesses

Action 14: Work with industry to create an NWT Biomass Industry Association.

Reviewing Progress

Action 15: Evaluate progress in implementation of the actions in this Strategy in 2015.

Willow harvesting near Fort McPherson - Photo Credit: FP Innovations

APPENDIX B
Summary of Biomass Support Programs

Energy Efficiency Incentive Program (EEIP): is designed to help homeowners and consumers purchase new, more energy efficient models of products that they use every day, including wood or wood pellet stoves.

Alternative Energy Technology Program (AETP): is designed to promote the use of renewable energy sources in the NWT. The funding is split into three sections:

The **Community Renewable Energy Fund** is available to Aboriginal and community governments, GNWT departments, boards and agencies, and non-profit organizations. The program assists community-based installations of alternative energy systems, or the conversion of an existing conventional energy system to alternative energy technology. The objective of this fund is to promote projects that advance the knowledge and effectiveness of new, clean energy technologies in northern environments. Funding of up to one-half of the project cost is available, to a maximum of $50,000 per year.

The **Medium Renewable Energy Fund** is available to assist commercial businesses, including off-grid camps and lodges, that want to incorporate commercially available alternative energy technologies into their operations. The objective of this fund is to reduce fuel use in remote locations where fuel prices are extremely high due to added transportation costs. Funding of up to one-third of the cost of qualified alternative energy systems is available. The maximum amount that will be provided to any recipient is $15,000 per year.

The **Small Renewable Energy Fund** is available to assist NWT residents to integrate commercially available, clean energy technologies on their property, building or other assets for the intent purpose of reducing fuel usage. Funding of up to one-third of the cost of qualified alternative energy systems is available. The maximum amount that will be provided to any recipient is $5,000 per year.

Energy Conservation Program (ECP): is available to assist community funded departments, boards and agencies, and non-profit organizations in support of projects which reduce usage of water and electrical or heat energy.

For more information, contact
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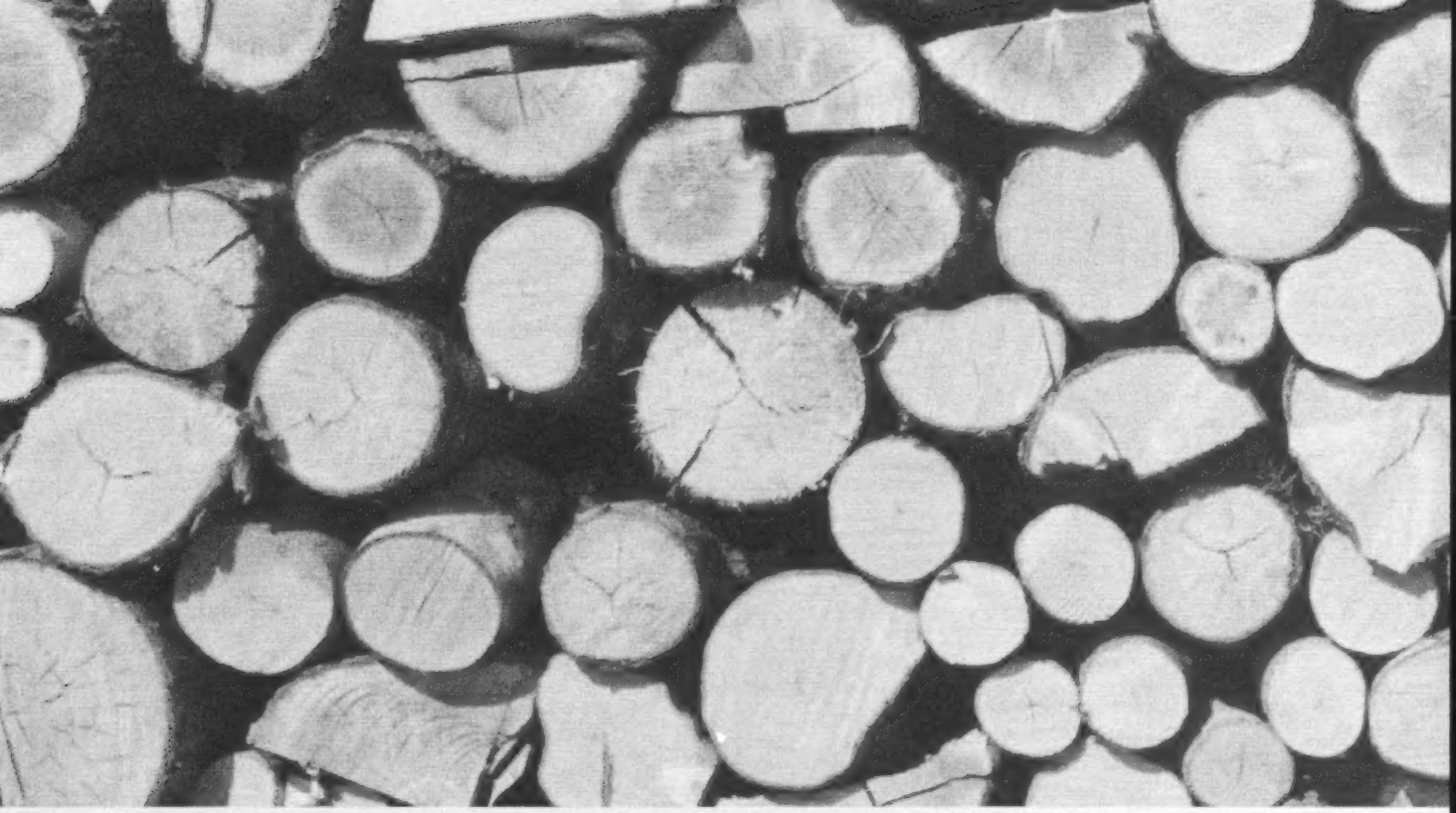

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